

## 4. Man Kok Tsui, Archæological Site 30, Lantau Island, Hong Kong

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### INTRODUCTION

This Late Neolithic site at Man Kok Tsui 萬角咀 is Number 30 in the series of sites, about which the present data has been compiled by the University Archæological Team. This is not the first in the series for already Heanley and Shellshear (1932) and Schofield (1938) had covered the area thoroughly and we are greatly indebted to Dr Schofield for an unpublished map showing most of the sites known to these workers. However the series was not complete and, for their purposes, the compilers did not differentiate between single finds and possible dwelling or working sites rich in finds. It is our present aim to work over the area again and try, from surface observation, to assess true settlement sites in order to get a picture of the early settlement pattern of this small part of the Southeast China coast. It is hoped that a complete report on this will appear in due course.

It has been the policy of the Team to undertake excavation only when findings indicate that, with the material and personnel available, informative results were possible. This present site was found in a relatively undisturbed condition, that is, it had not been built over at any time, though the surface had clearly been disturbed by intermittent cultivation. But as there appeared a probability of more refugee farmers moving onto the land, the study and excavation now reported were undertaken.

The findings of this work show a site similar to those reported by Father Finn (1958) and Dr Schofield (1938) at Tai Wan 大環, Lamma Island 博寮洲 and Shek Pik 石壁, Lantau Island 大嶼山 respectively. That is to say a seaside site where the main centre of habitation seems to have been on the seashore which now, due to the change in shore line in this area, forms a raised beach behind the present sea beach. This raised beach is now often cultivated or is used as a site for 'pot-burials'. Although the finds at Man Kok Tsui were not as varied as those from either of the above mentioned sites, the area of study was wider and attention was paid to the relative position and distribution of finds. This showed a rough zoning of finds leading to a possible theory of 'working', 'dwelling' and 'burial' areas. This theory could not be firmly substantiated as this report shows, but it will be checked by further studies on similar sites.

The pottery finds seem to have solved the problem raised by Father Finn (1958: 99) as to the relative ages of the rough and hard wares. Father Finn put forward the theory that the rough ware is earlier than the hard; but from the distribution of the wares found at Man Kok Tsui, particularly on the hill-side site, it seems quite clear that the two types are contemporaneous. It is also perhaps noteworthy that

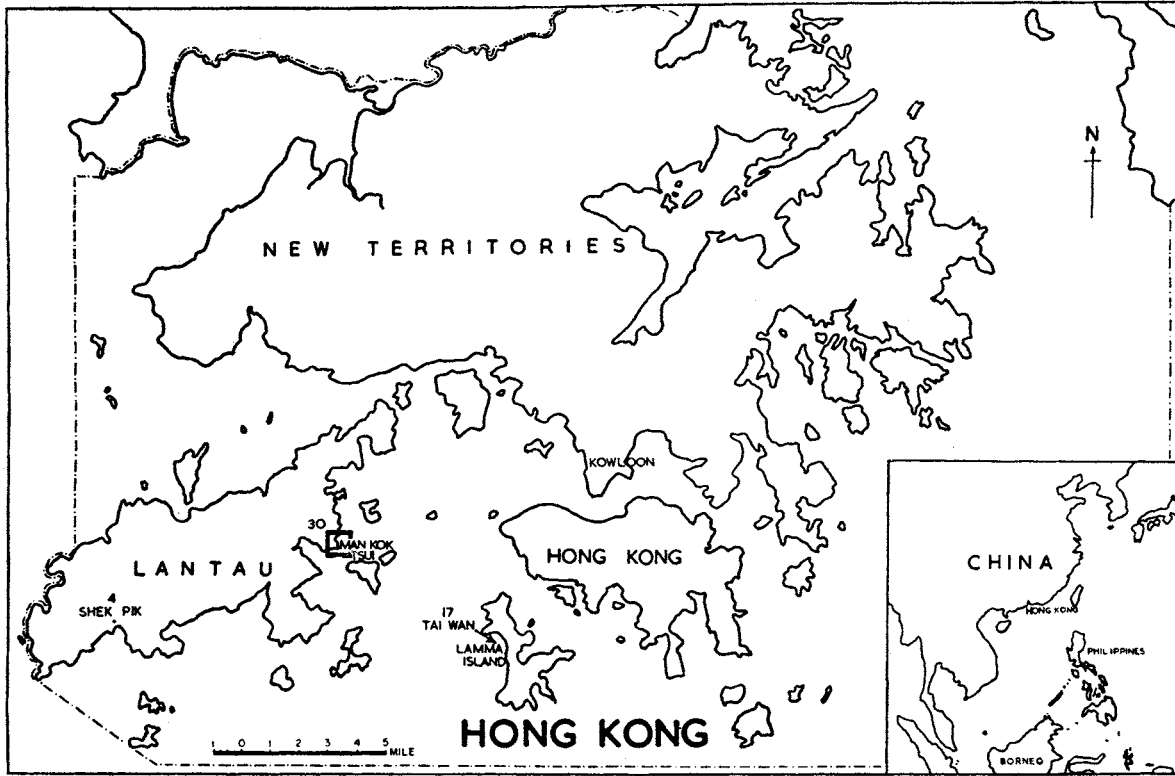


FIG. 1. Map showing position of Man Kok Tsui.

such fragments of bronze as were found were associated with the double-F sherds, albeit in a disturbed level.

These problems cannot be solved by study of one site and were certainly not solved by this excavation, but the following report gives our findings so far.

M. T.

# I. HISTORY, TOPOGRAPHY AND GEOLOGY

Site 30 was first reported in April 1958 by Dr S. M. Bard, a member of the University Archaeological Team. Later investigation disclosed that it was, in contrast with nearly every other site in the area, practically undisturbed. The field work was carried out during the summer and autumn of 1958 by members of the Team.

*Topography.* The purpose of this report on the topography and geology of Man Kok Tsui is to provide the setting for an appreciation of the archaeological site at Man Kok Tsui, Silvermine Bay, Lantau Island, New Territories, Hong Kong.

Man Kok Tsui is located (Fig. 1) at the easternmost point of the north arm of Silvermine Bay.

The effective area over which artifacts have been found is approximately 1 hectare.

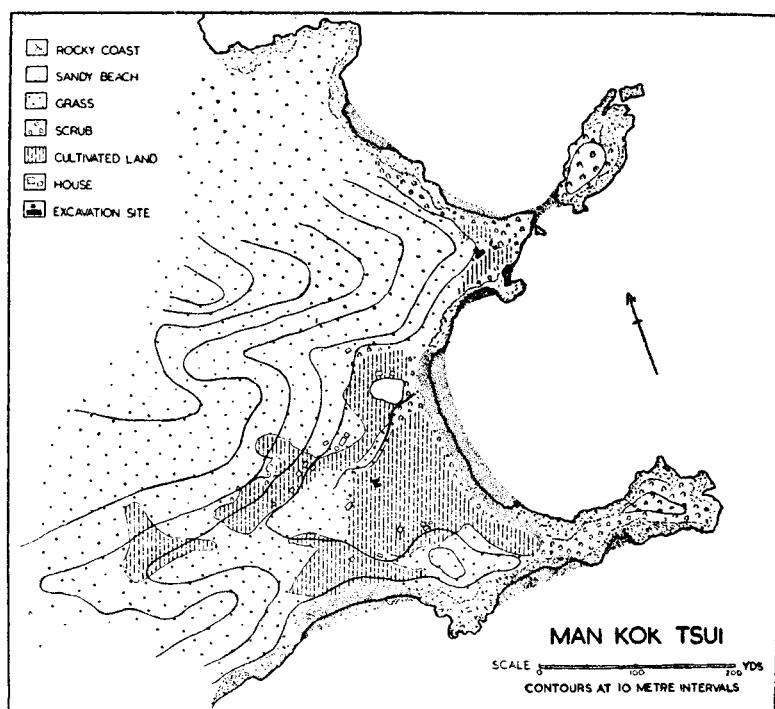


FIG. 2. Physical map of Site 30.

The relief of the surrounding country-side is essentially hilly. Steep slopes, barely relieved by narrow benches, fall from about 50 metres above sea level in the west to a sandy beach in the east (Fig. 2). There is a well-marked east-west valley

in which a stream runs, about 50 metres north of the steep cliffed coast that extends eastwards to Man Kok Tsui.

Differential weathering of the rocks below has produced a variable cover of disintegrated material (both in character and in thickness) that controls the topographic scene. Thus away from the cultivated land the vegetation cover everywhere is a rough grassland and scrub. The absence of tree growth, coupled with the traditional Chinese custom of burning the scrub for fertilizing purposes, and steep slopes, has helped the normal processes of creep and rainfall run-off to remove this loose material often including boulders many feet across.

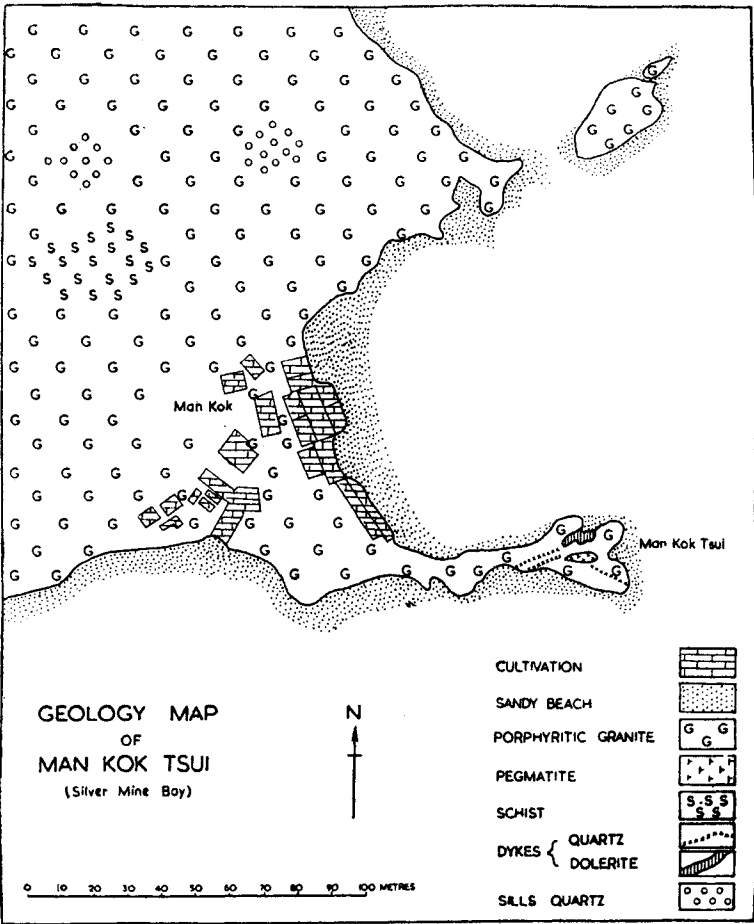


FIG. 3. Geological map of Site 30.

Examination of surface outcrops, together with the sections of the wave-cut cliffs, has revealed the lithology and general geological structure. This can be described simply as a porphyritic granite mass that has been well fractured by later earth movements when quartz and dolerite dykes were injected (Fig. 3).



*Petrography.* The predominant crystalline acid intrusive rock is Lantau porphyritic granite. This type of granite is characteristically a very coarse-grained rock with large phenocrysts of orthoclase up to 2 cm. in length. The average granularity is about 2 mm. and there is no ground-mass. The most abundant mineral is a pale reddish-violet orthoclase showing well-developed carlsbad twinning. Other minerals that can be recognized in the hand specimen are quartz and biotite mica.

At the extreme tip of the Man Kok Tsui peninsula are two distinct sets of dykes: quartz and dolerite. The quartz dykes are resistant to weathering and are largely responsible for the present existence of the peninsula. Above the centre of the peninsula tip and between two quartz dykes is a very coarse pegmatite composed of felspar and quartz; these two form the east-west backbone of the peninsula. Just two metres north of this pegmatite is a swarm of dolerite dykes. They spread over a width of about 15 metres and extend into the sea. They are extremely susceptible to weathering and have been eroded into shallow gullies.

Two quartz sills are exposed on the terraces approximately 60 and 100 metres due west of the north promontory. They were worked recently in 1954 by miners prospecting for wolfram. This quartz no doubt was the source of supply of the rough-shaped quartz discs and the polished arm-rings.

A schist outcrop, predominantly composed of quartz and muscovite, is about 50 metres due west of the middle of the bay and supplied the material for many of the ornamental rings and tools.

### *Early Settlement*

The existence of the sheltered bay on which Man Kok village stands can be directly attributed to the resistant rock qualities of Man Kok Tsui peninsula against weathering and sea erosion. In the course of many centuries the valley behind has been sculptured by the stream, and a sandy beach has been thrown up by the sea. The basic living conditions of shelter and water being present offered an inducement for an early settlement here.

### *Local Materials*

An examination of the rock material used in the manufacture of the artifacts shows that most, if not all, of the material used for artifacts was of local origin, briefly:

<i>Artifact</i>	<i>Material</i>
Amulets and rings	Quartz dyke
Chisels	Fine-grained igneous rock
Rings and tools	Schist
Pottery	Clay

### *Raised Terraces*

The raised terraces or benches are flat erosion surfaces of marine origin that are now above the present sea level. The principal processes of origin are as follows:

- a. Wave-cutting of the coastal margin when the sea was at a higher level than it is today.
- b. Elevation of the terraces above the present sea level through: *i.* lowering of the sea level, or *ii.* uplift of the land, or *iii.* combination of both.

These terraces are common landscape features in Hong Kong and the New Territories, especially where they appear as projecting spurs (Fig. 4).

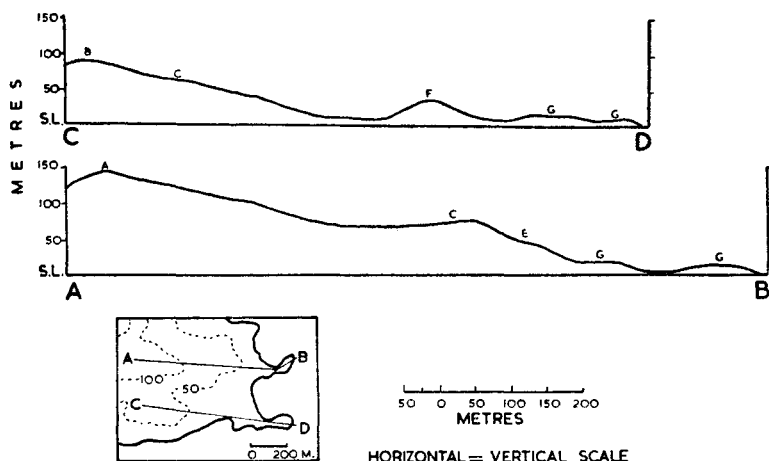


FIG. 4. Profiles of raised beaches and terraces (Man Kok Tsui).

The following terrace heights have been established:

122—131 metres	55—59 metres	20—24 metres
84—90 „	37—41 „	
65—70 „	29—31 „	

Changes in sea level during recent geological times have caused eustatic change, possibly related to the melting of the ice sheets and caps. There was subsequently a gradual upward movement of the land. Land movement was also caused by isostatic phenomena.

The downward movement of the old shore line caused some sites to move down closer to the present sea level. Younger and therefore lower cut terraces are also distinguished.

Periods of standstill allowed for the weathering of the terraces and erosion of the surface features. As a result weathered debris is found on the surface.

### *Carbon Dating*

Several pieces of charred and decayed wood were taken from 30.3 from about 2 feet deep at the base of the regolith and sent to Professor de Vries of the University of Groningen, Holland, for Carbon-14 dating. They were found to be about 350 years old. Since these samples were about 3 feet above the pots this is solid evidence of the undisturbed nature of the material in the lower part of the regolith.

S. G. D.

## II. ARCHÆOLOGICAL FINDINGS

This is the site of a Late Neolithic settlement with the main habitation probably in the centre valley. This valley is protected and has two gently shelving sand beaches both of which are shielded in most weather. The inhabitants could well have been fishing people but have left scant evidence of their occupations. Perhaps they were boat people living partly on land right at the water's edge, much as many do today. No evidence of agriculture has been found but this is not to be expected as this area is regarded as having been primary forest at that time, for large tree stumps of primary forest have been found during construction work in the Colony. Early Chinese literary sources mention the primitive agriculture of the people of South China as being of the 'slash, burn, planting stick' method which would leave few traces (Chi Ch'ao-ting 1936, pp. 109, 98). Again no signs of dwelling sites have been found, no traces of structures, fire, food refuse or clothing and no human or animal remains. In the local conditions of sand, high humidity and torrential rains this is not surprising but it does not make for accurate or complete archæological information.

Finds of indestructible material such as stone and pottery however are plentiful and represent a culture similar to that reported by Father D. J. Finn, S.J. (1958). The stone implements are varied, especially the polished stone adzes which show almost all the typical South East Asia types. This suggests a Late Neolithic dating. The finding of a few fragments of bronze supports this. Furthermore these fragments appear to be of the type usually regarded as of the Warring States Period (481-221 B.C.). This dating is further supported by the pottery which, when it is decorated, is impressed with geometric designs also identified as of the Warring States Period in China. In many cases the actual designs are local variants but the technique of impressing them is common with northern sites. However this region was probably not settled by Chinese from the north until the 5th or 6th century A.D. and, as there are few Han remains found, the local inhabitants could have continued to use tools and pottery of an earlier period for some time after these had been superseded by the northern people. Lacking more scientific evidence and with no stratigraphy to guide us, but purely on analogy with other finds, the dating must stay at Warring States, possibly taking this as the earlier date.

When this site was first discovered the surface finds were so plentiful and localized that it was decided to sub-divide it into two areas. This sub-division was later expanded as is shown on the map (Fig. 5, also Pl. I). The general site number is 30. The sub-divisions shown on the map are used as reference throughout this report.

The present cultivation and settlement of this place is a recent development. There are no archæological or literary evidences of earlier Chinese settlement. For though there is a boundary stone on hill 30.4 which marks one of the limits of the Sung Imperial House property at Mui Wo 梅窩 no sign of settlement at that time has been found. A Ch'ing Dynasty grave has been uncovered on hill 30.3, this gives the date 'Kuang-hsü, 16' (A.D. 1891). As to the recent settlement, the villagers of the neighbouring island of Ping Chau 平洲 say that this valley was farmed about 1904 by To Yut Yau 杜日有. But he lived at Mui Wo and walked over to his fields. He gave

up after some years partly because of the inconvenience and partly because the 'ghosts were too fierce'. Apparently the next settlement was about 1927 by a family from Macau by the name of Fu who all left after about three years though nobody now remembers the reason for this. Then in 1932 seven families moved in, mostly

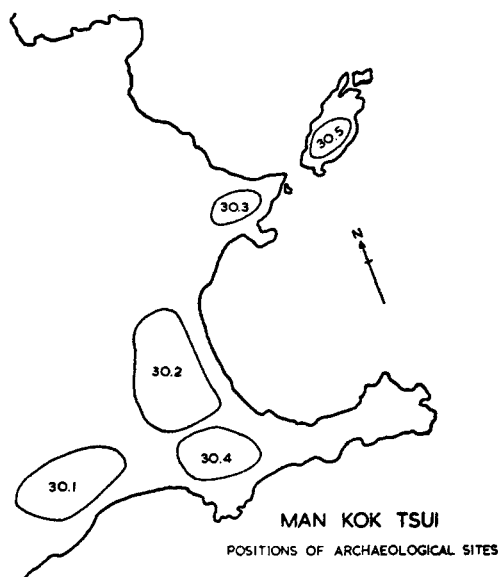


FIG. 5. Map showing archaeological subdivisions of Site 30. See Plate I.

from Wai Yeung 惠陽 in Kwangtung. They stayed until the war (1941). At that time there were six men, seven women and three children but at the outbreak of war in this region even these people left. However after the war one of these families, that of Chen Sau 鄭秀, came back and they are now the oldest inhabitants. They have been joined by other families, mostly from Yan Ping 恩平 in South Kwangtung, and there are 35 people living in the valley at present, according to information gathered by Mr K. S. Leung, Land Bailiff, District Office South, New Territories Administration. So that although this is an average fertile valley with its own water supply, it appears even in recent times to be settled only in times of need. It is interesting to note that the question of ghosts has been mentioned though nothing further about their characteristics could be gathered from the villagers.

The present occupants are now farming the valley and opening up the hill slopes. During this work they have uncovered many artifacts lying on or just below the surface. But they have also destroyed many pots, it being the custom to break any whole pieces found.

### 30.1

The hill slope is now almost entirely cultivated. Even the rough patch on the crest of the hill, at present uncultivated, shows signs both of grass burning and earlier cultivation. A test pit here, 3 feet by 6 feet and 4 feet deep, showed a top grey layer containing rough potsherds, one polishing stone and some fragments of

charcoal. This layer is 10 in. to 18 in. deep and where it gives way to a red clay there is no further sign of former habitation. So there is a shallow culture layer on and just below the surface with no sealing layer. It is also clear that, where there is or has been cultivation, finds will have been disturbed. Finds from this area must all be regarded as 'surface finds', many of them having been moved about during cultivation. Indeed the retaining walls of the terracing and the rubbish piles were found to contain numerous stone implements. These range from ground and polished cutting tools to rough stone pounding and grinding tools (Figs. 14 and 15). Throughout the valley there are many chipped quartz and other stone discs of various sizes, a large number of these were found in this area (Fig. 17 and Pl. VI). The fields down the slope abound in potsherds, both soft and hard of different patterns (Figs. 20-23 and Pls. VIII-IX).

This area is noteworthy for the number and variety of stone implements, some half made, some worn or broken and some perfect. Comparison with other parts of this site suggests that this may have been the stone-working district of the settlement and its workshop.

The foot of the adjacent hill (30.4) has been cut back and in the resultant bank there is a section of the remains of a 'kiln' well preserved (Pl. II). This is made of soft sandy bricks, bottle-shaped in section with a layer of lime in the bottom. The top has collapsed and might have been above or at ground level. The neck of the 'kiln' is full of soft pottery cylinders without systematic arrangement. The bank on either side contains a variety of potsherds. However these do not appear to be wasters from a pottery-making kiln. On the shores around the Colony 'kilns' frequently occur and remain an unsolved problem. Some people think they may have something to do with salt production, but no local inhabitant has corroborated this theory so far. They are probably not connected with Neolithic sites, though often found near them.

### 30.2

This area comprises all the low-lying flat valley land in the centre of the site. It was formerly part of the old sand beach and the streams passed through it. The entire area has been cultivated including the less favourable, decomposed granite hillocks.

The fields were littered with sherds, stone rings and cores together with the ubiquitous rough quartz discs (Fig. 17). Again a wide range of impressed pottery patterns was found. It was noted that there was an almost complete lack of later (historic) pottery.

A T shaped trench was dug, 40 feet long by 4 feet and 4 feet deep with the two arms 12 feet long by 6 feet and 8 feet deep (Fig. 6).

The results of this show a culture layer of brown sand down to 3 feet 6 inches. This changes to a coarse yellow sand going down to 8 feet when the disintegrated rock level is reached. Finds are limited to the brown sand level and consist mainly of potsherds. This is often found in concentration showing a collapsed whole pot, in which case it is always of soft pottery. But it is noted that a large number of big sherds, both soft and hard, of many different patterns were found. Stone implements and particularly all stages of the manufacture of stone rings occur throughout

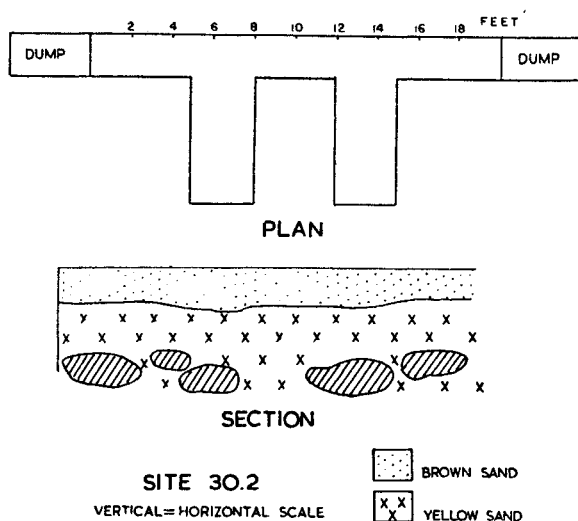


FIG. 6. Dig plan of 30.2.

the area. Two small adzes came from the dig. A few fragments of bronze were also found. These are pieces of leaf-shaped knife and a fish hook (Cheng 1957), (Finn 1958).

There is no stratification and as the finds had no sealing layer, all finds must be regarded as surface finds.

No indications have been found of material being washed down by the stream or from the hill-sides in this valley. It appears to be limited to the sand bank which was on the old seashore. As this occurs on many seashore sites in this region, it might indicate that the inhabitants were boat people living partly on land right at the water edge. Nothing so far has been found to contradict or to support this theory.

### 30.3

The hill slopes here are being opened up. The farmers are terracing straight back into the hill-side, and in so doing, they have found several whole pots which we were shown when this site was first discovered. Two of these were *in situ* and the place of origin of the others was pointed out. All of these had come from a depth of between 2 and 2½ feet from the original surface of the hill slope (Fig. 7).

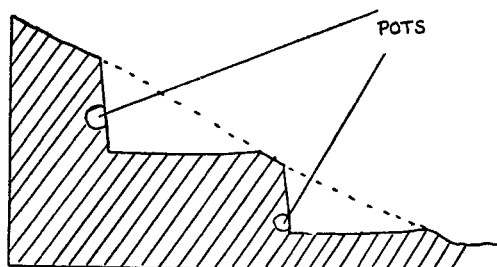


FIG. 7. Diagram showing the depth of finds relative to the original hill slope.

After a careful survey three good stone arm(?) and ear(?) rings were found on the surface. A large stone-ware pot was also uncovered during terracing; it was crushed and part had been removed but a good proportion of it was dug out and reconstructed. (Pls. IV and XIIa)

These finds seemed to be scattered over the hill with no discernible arrangement except their similar depths. But the fact that the pots were whole and the stone artifacts of such good quality suggests that this may have been a burial site. Further to this the farmers stated that similar stone and pottery objects had been found and that such things as had been found by the Team on the surface had been thrown up onto the bank by them as they dug. There were therefore no finds in this area which could at least prove an undisturbed site.

### *Excavation*

The main purpose of the excavation was to try to discover the layout of what appeared to be a burial site. The dig was planned as shown on the sketch map (Fig. 8). As the site is mainly on very steep hill slopes it was necessary to dig in a series of steps (Pl. III).

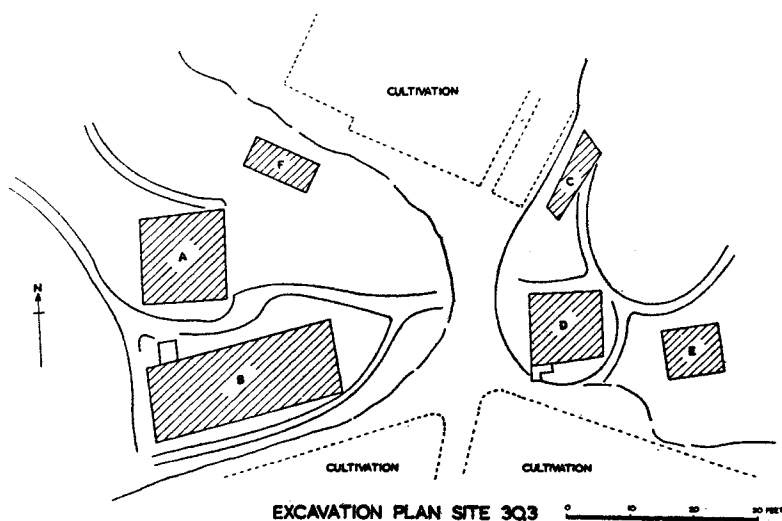


FIG. 8. Plan of the trenches at 3Q.3.

As in other digs on this site all trench sections showed a complete lack of stratification. The top grey humus layer was from 3 in. to 9 in. deep, being thinnest at the top of the hill. Below this there was a decomposed granite zone containing many decomposed boulders which could be clearly seen. Deeper still there were more boulders less decomposed—this was at a depth of from 2 ft. to 6 ft. The only exception to this sequence was where the soil was a clay in trench F.

The hard pots were all found lying on one side (Pl. IV), and the soft pots crushed but often not scattered far. No balanced or systematic layout was found. This possibly suggests that these objects were not actually buried but were placed on

the hillside perhaps on a ledge or in the cleft of a rock, and that as the rock decomposed they were covered by soil creep and regolith washed down from the slope. This might explain the position of the finds in trench B. A further point seems pertinent. The two large pots found at the foot of trench D were between two decomposed granite boulders. These two had definitely been placed in a cradle of rocks, both were lying on one side and both were crushed.

There was no evidence of human or animal burial. Skeletal remains have been found on similar sites by W. Schofield and Balfour (Schofield 1938), who however were unable to preserve the bones for examination.

*Square A* is on the top of the hill. Here the top layer of grey earth was very thin. The disintegrated rock level was reached at 4 feet. The small very fragile soft pot was found at about 3 feet deep in this square. Its position in the north-east corner of this square possibly connects it with the finds in Square B.

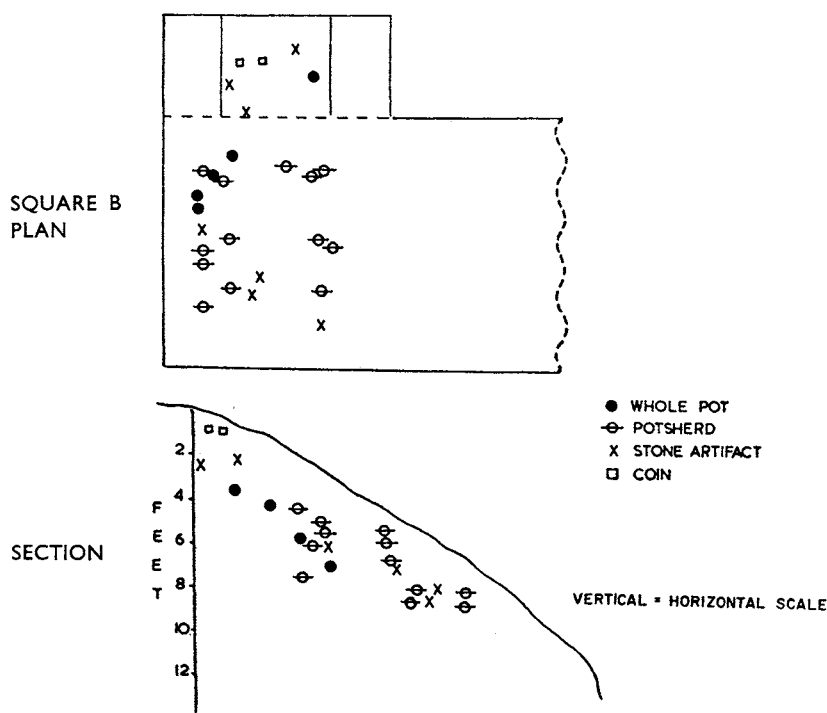


FIG. 9. Dig plan of trench B.

*Square B* is on a very steep slope and was excavated in steps (Fig. 9, Pl. III). The west end was the richest and all finds appear to run in a line down the slope. All finds were at a depth of about 3 feet and in an area about 5 feet wide. Though there seems to be an agglomeration of material here no formal arrangement emerges except that possibly the soft pottery is grouped around a hard pot. The hard pot was lying on one side (Pl. IV) and the soft pots, though complete were shapeless. These have been marked as whole pots in the diagram to show any possible



arrangement. The adze and stone ring, being in line also down the slope from the pottery, may possibly have rolled down the slope, perhaps from the pottery.

The soil cover is deep on this slope and the decomposed rock level was never reached.

This square was extended to Square A in an attempt to find a connection. Ch'ing coins of the Kuang-hsü 光緒 period (1875-1907) were found on or near the surface and some soft pottery as shown in the diagram.

*Square C* had a thin soil cover and the disintegrated rock level was quickly reached. One stone core was found near the surface.

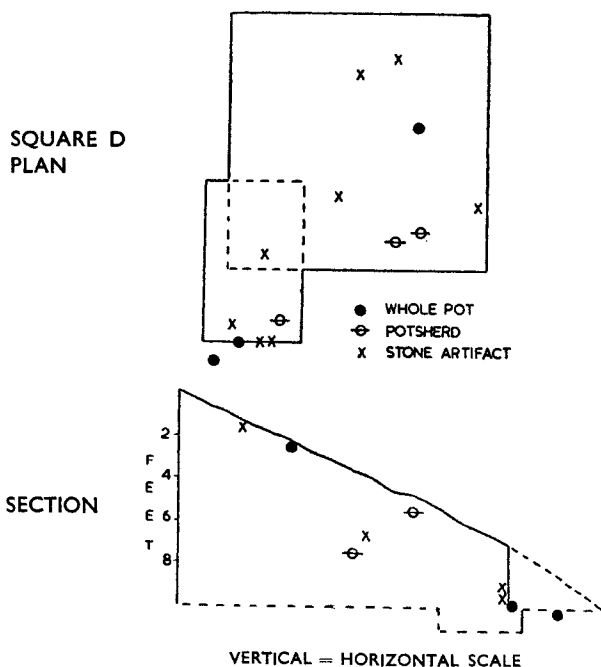


FIG. 10. Dig plan of trench D.

*Square D* is also on a very steep slope (Fig. 10). The finds in this square were more scattered both in depth and area. One hard pot was found about 1 in. below the surface, this was also on one side (Pl. IV). A section was cut through the foot of this square to reach the place where the large stone-ware pot (Pl. XII) had been found in the bank. Another large stone-ware pot (Pl. XIIb) was found very close to the first. These were lying between two decomposed granite boulders and appeared to have been deliberately placed there. They are both net patterned and are slightly round bottomed thin strong stone-ware typical of the Late Neolithic pottery of this region. The smaller of the two has definite traces of glaze and this with their size raises doubts as to their date.

*Square E* is on a slope where there is no rock disintegration. This was dug deeper than 2 feet but no artifacts were found.

*Square F* on the south face below *Square A* has a clay soil (Fig. 11). However the finds were much the same as in the other squares with a collection of pottery consisting of one hard pot and three crushed soft pots. One section of stone ring was also found.

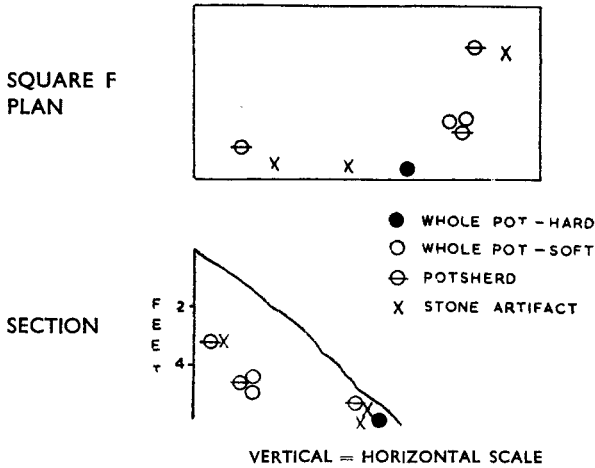


FIG. 11. Dig plan of trench F.

### 30.4

The south face of this hill-side has been cut back extensively. Scattered potsherds have been found on the surface. In the course of digging the farmers have found pottery cylinders and one whole pot (Pl. XV). This is a wheel-made bowl and is tentatively dated as Six Dynasties (A.D. 420-589)

### 30.5

This small island is overgrown and unused. Part of the undergrowth was burnt off and a search revealed fairly recent graves. The present villagers know nothing of these so they may be the remains of the 1927-30 settlement. A kiln was also found with a quantity of half-burnt coral in the base. This is not the same style as the 'kiln' at 30.1 and is probably of the same date as the graves and is a lime kiln. A few fragments of net patterned pottery were also found on this area.

### The Finds

*Stone Artifacts.* The largest proportion of these come from 30.1 though many were also found at 30.2. Types range from the pebble tools to polished stone adzes and are similar to those reported from other sites in this part of China. There is evidence of pre-polishing, chipping of the adzes and some artifacts show careful bi-facial chipping to form an edge (Fig. 13). However the majority appear to have been chipped only in the initial stages, being ground and polished to finish.

The hammer stones (Fig. 14) are mainly of coarse local granite and have indentations and grooves which show their various uses. One much weathered cleaver was also found (Fig. 15g).

The grinding stones show a group of artifacts criss-crossed all over with U-shaped grooves; the use of these is not clear though they may have been used in polishing bone implements, such as needles, which have now disappeared (Fig. 15a, b, c). Three stones from 30.1 (Fig. 15i, j, k) have clearly been used for finishing some circular shape, possibly the inside surface of the innumerable stone rings.

The cutting edges of micaceous sandy shale, are often fragmentary but show a variety of curved and straight edges ranging from sharp to rounded section (Fig. 19, I). The majority of these were found at 30.2.

Polished stone adzes of most of the types found in South East Asia are present at this site. Lentoid adzes are most numerous (Fig. 16, III). Stepped, rectangular and semi-shouldered are also found (Figs. 16, I and II). No true shouldered adze was found though they are present in this region. The adzes are made of a variety of stone, mostly found locally. Blanks and half-made or broken adzes were also found, mainly at 30.1 (Fig. 13).

An immense quantity of stone discs was found at both 30.1 and 30.2 and a few at 30.3. These have been reported at other sites in this region but no satisfactory explanation of their use has been put forward. These discs are mostly of quartz but other stones are also used and they vary in size, the larger ones being about  $3\frac{1}{2}$  in. in diameter. They are chipped on both sides, some very carefully, and have one side flatter than the other (Fig. 17). This is sometimes achieved by using a flake and sometimes by chipping all over. Some of these discs at least appear to be the rough-out for stone rings, though there are many that are too small for this purpose and where they also have no sharp edge the use is not clear. However in the 30.2 area, especially in the digging, a number of these discs were found at all stages of the manufacture of the rings from the initial smoothing of both sides, then grinding of the outer edge and the grinding of a ring, usually from both sides (Fig. 18). From the series it now seems clear that the polished discs are the cores left from this grinding which was presumably done with a hollow instrument and an abrasive much as jade rings are made locally today. The cut is U-shaped so that both the ring and the core have sloping sides, and the core is often lopsided as the grinding was done from both sides (Fig. 12).



FIG. 12. Diagram of section to illustrate the process of grinding a ring and the resultant core.

A wide variety of resistant stone was used for these rings and sizes range from arm to ear-ring though the use is by no means clear. There is a variety of sections. Many of them are similar to those reported in North and South China (Fig. 19, III). Similar stone rings and cores appear with Warring States finds in Changsha and other widely separated sites from Szechwan to Honan. The round sections are all dolerite while the flat bevelled section may be of quartz or other rock. No round section quartz rings have been found. The complete rings found show the technique of making an opening which is carefully ground.

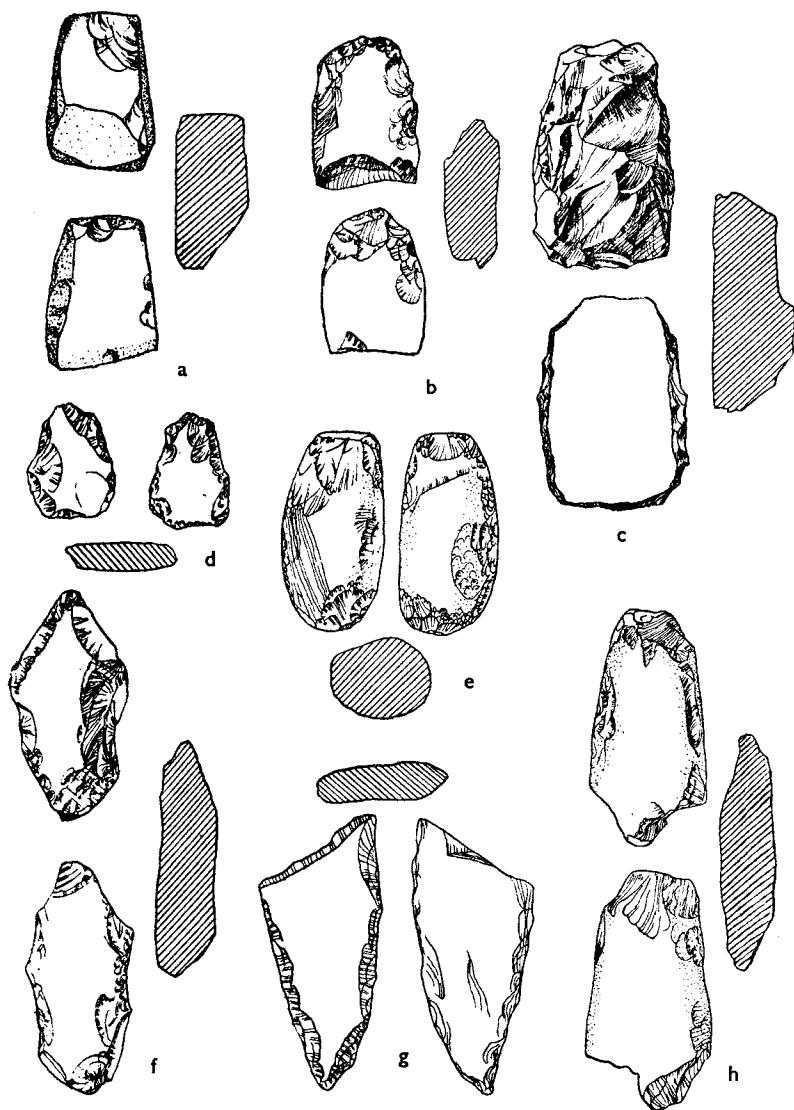


FIG. 13. Half-made tools showing pre-polishing chipping.  $\frac{1}{3}$  natural size.

a. Rhyolite/dolerite, 31.1.

b, d. Rhyolite, 30.1.

c. Fine grained volcanic, 30.1. See Plate VI.

e. Microgranite, 30.2.

f, h. Black rhyolite/dolerite, 30.1.

g. Dolerite, 30.2.

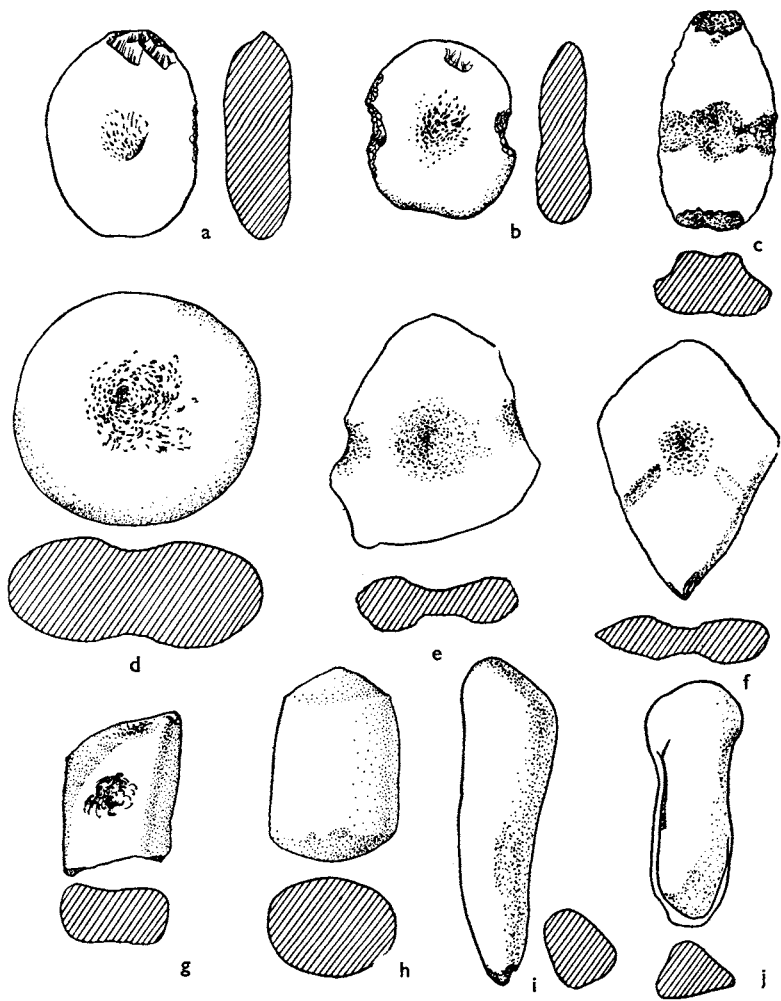


FIG. 14. Hammer stones. 1/3 natural size.

- |  |                                 |
|--|---------------------------------|
| <i>a.</i> Rhyolite/fine grained granite? 30.2. | <i>e.</i> Granite, 30.1.        |
| <i>b.</i> Rhyolite, 30.2.                      | <i>g, j.</i> Mica schist, 30.2. |
| <i>c, h.</i> Rhyolite, 30.1.                   | <i>i.</i> Granite, 30.2.        |
| <i>d, f.</i> Granite/porphyry? 30.1.           |                                 |

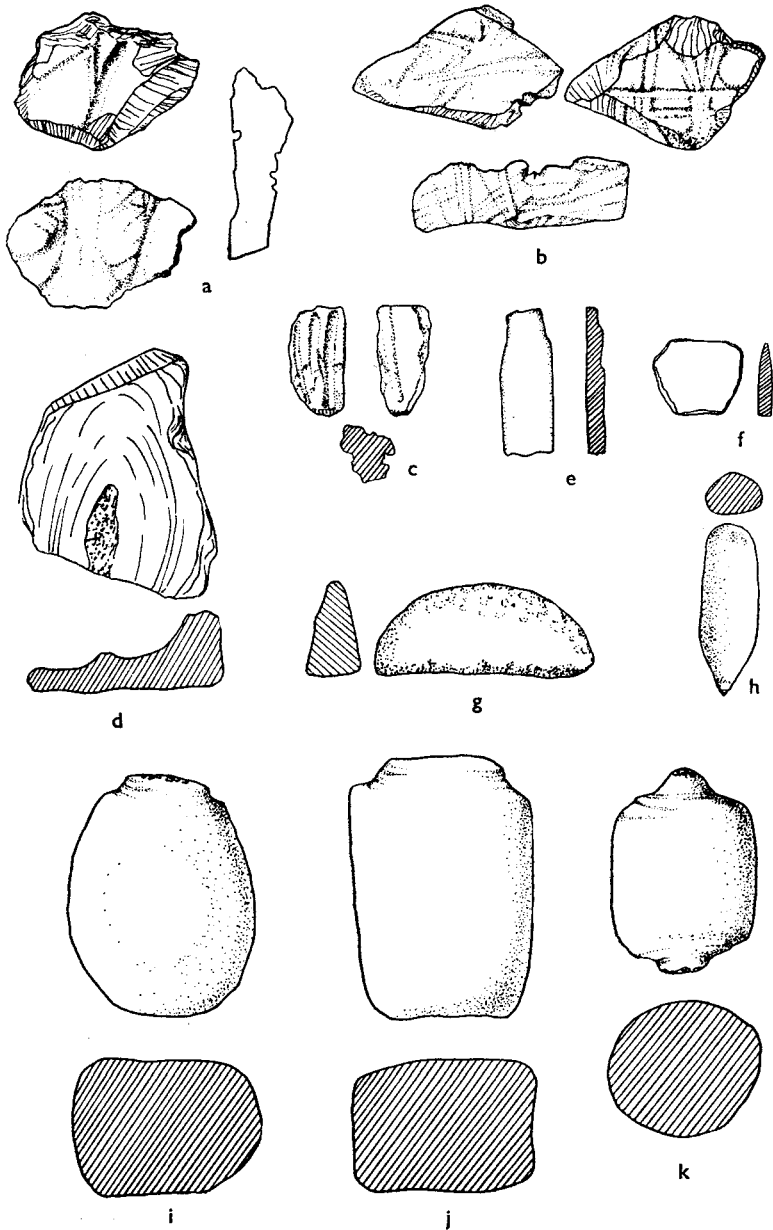


FIG. 15. Polishing stones, cleaver and boring tool. 1/3 natural size.

a-d. Quartzite, 30.1.

e. Mica schist, 30.2.

f. Quartz, 30.2.

g, j. Rhyolite, 30.1.

h. Rhyolite with flow structure, 30.2.

i, k. Porphyritic rhyolite/granite? 30.1.

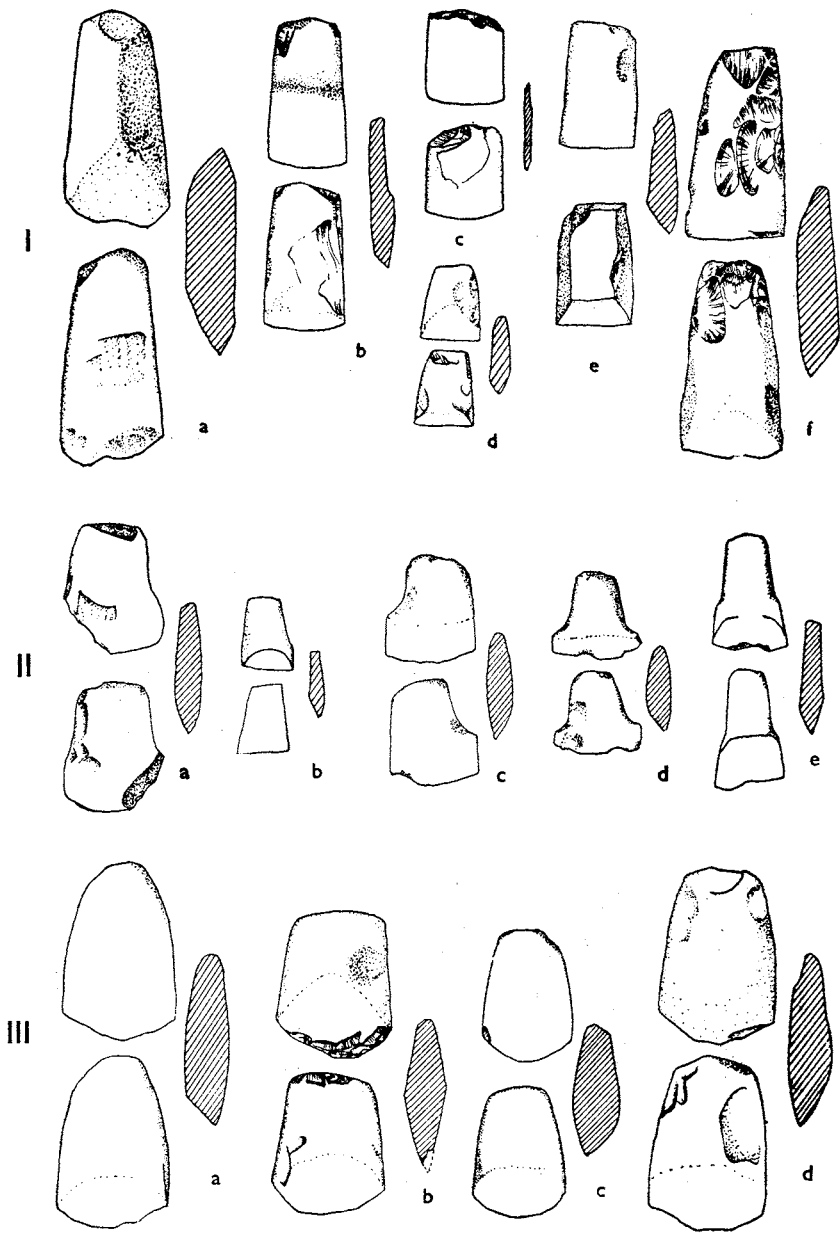


FIG. 16. Representative adzes. 1/4 natural size.

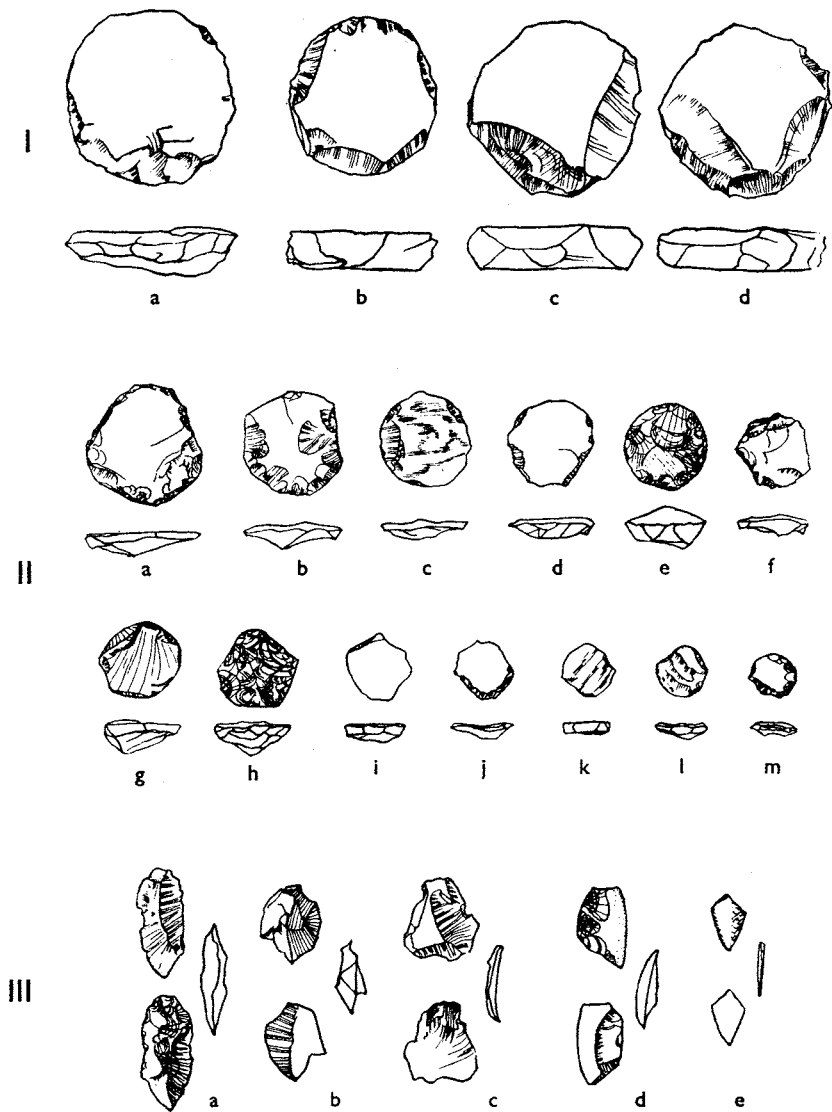


FIG. 17. Chipped discs. 1/4 natural size. See Plate VI.



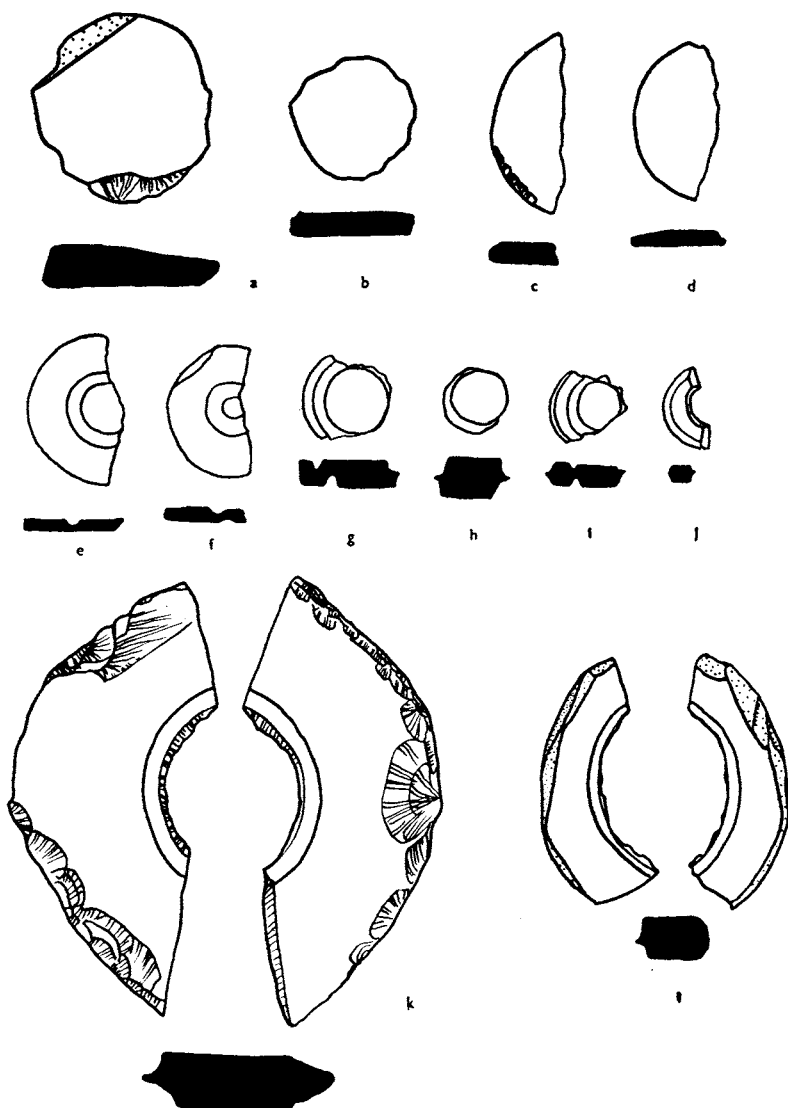
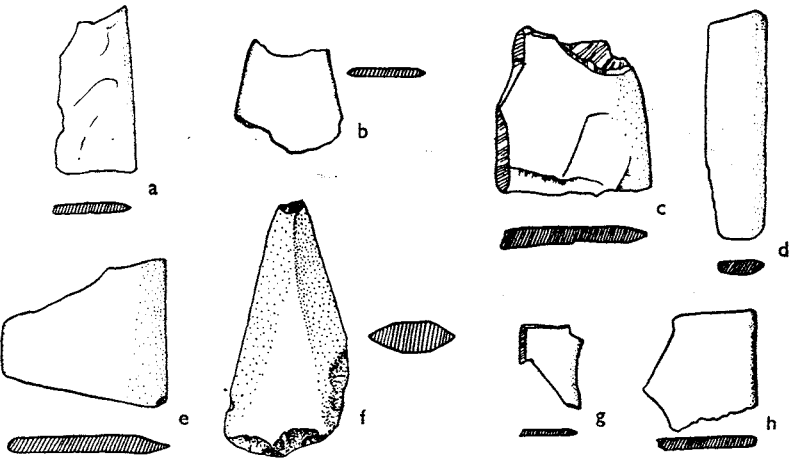


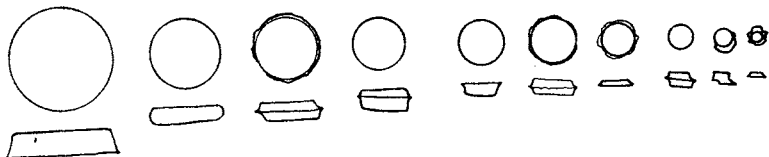
FIG. 18. The manufacture of stone rings.  $1/2$  natural size. See page 197.



I. Cutting edges.

- a, h. Quartzite sandstone, 30.2.  
b, g. Micaceous sandy shale, 30.2.  
c, d. Micaceous sandstone, 30.2.

- e. Sandstone, 30.1.  
f. Sandstone, 30.2.



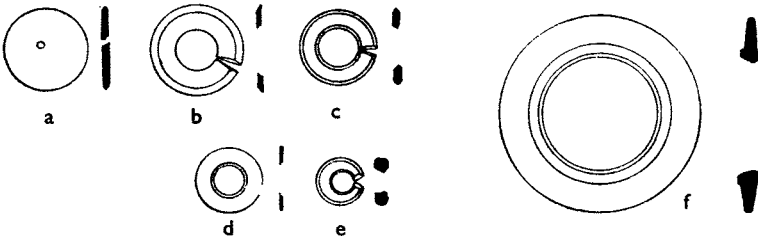
II. Stone cores.

Graded sizes found. Quartzitic and black rhyolite/dolerite. All parts of the site.



III. Fragments of rings showing variation of section.

- a-h. Quartzite, fine grained volcanic or rhyolite. All parts of the Site.  
i-k. Black rhyolite/dolerite.



IV. Whole rings.

- a. Green soap-stone, 30.3 trench B.  
b. Quartzite, 30.3 surface.  
c. Fine grained volcanic, 30.1.

- d. Quartzite, 30.2.  
e. Black rhyolite/dolerite, 30.3 surface.  
f. Rhyolite, 30.3 surface.

FIG. 19. Cutting edges, stone rings, cores and sections. 1/3 natural size. See page 197.

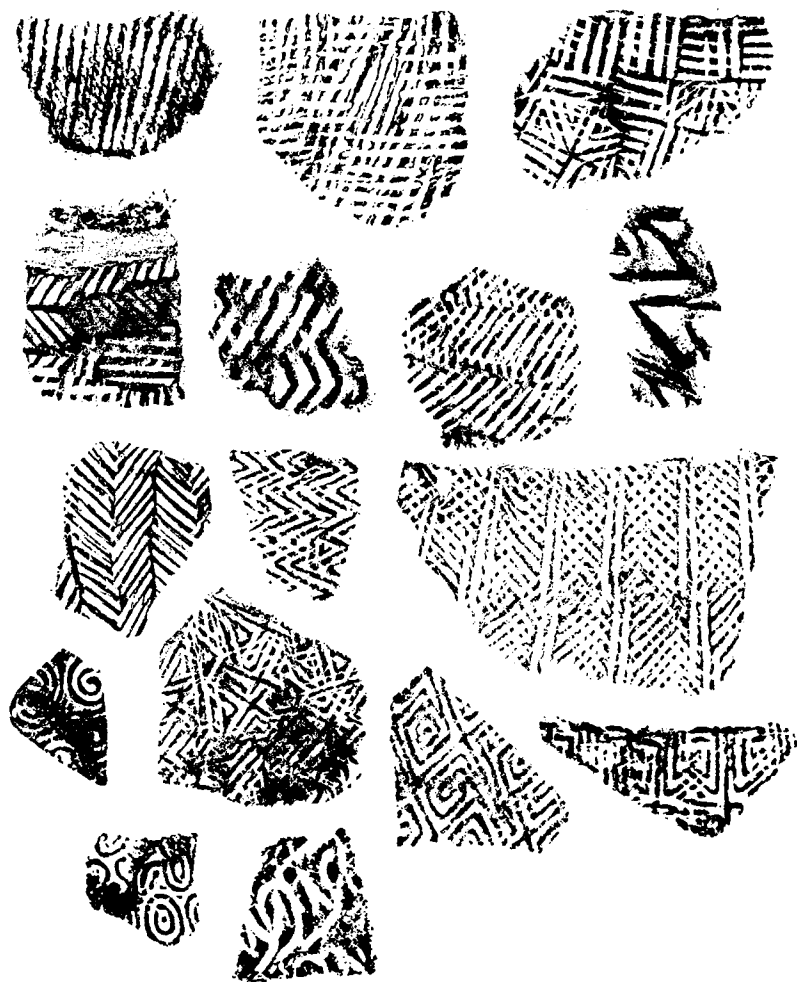


FIG. 20. Rubbings of designs on soft pottery. All from 30.1 and 30.2.  $1/2$  natural size.  
See Plate VIII.

*Pottery.* Except for a few odd sherds of brown burial jar of recent date and some porcelain sherds of ware made at Wan Iu 碗窑, Tai Po, New Territories, Hong Kong (18th–20th centuries) all the pottery found on this site seems to be of an early date and conforms to the general pattern of finds described by Father Finn and others in the Hong Kong region. That is to say it is of two distinct qualities, ‘hard’ and ‘soft’. The hard is typically heavy and very strong stone-ware, grey or buff, and often with a purplish tinge and speckles. The soft ware is sand mixed, rough and very friable. No whole examples of this soft ware were found though Father Finn reports several, often of considerable size. When this pottery, either hard or soft, is decorated, it bears an impressed design. The whole pots show that it was possibly finished on a wheel though most are round bottomed and of uneven thickness.\*

The impressed patterns which seem to have been imprinted with a die or paddle are all-over geometrical patterns stamped with varying accuracy over all or part of the body of the pot. There is a wide range of patterns. The simplest is the string pattern commonly found on the roughest wares. This runs vertically up the sides of the pot and is criss-crossed over the base (Fig. 20). Also on soft pottery are the chevron patterns which run zigzag up the side of the pot (Fig. 20) and the variants of the basket pattern (Fig. 20). As might be expected the patterns on the hard pottery are finer. The simplest is the net pattern. This may be used all over a pot or in combination with other more elaborate patterns when the net pattern appears over the lower part of the pot (Fig. 21). The more elaborate patterns are mostly variants of the lozenge or look like repeated small circles (Fig. 21).

*Double-F.* The most elaborate and completely distinctive pattern is the Double-F. This is apparently unique to Southeast China and was so named by Father Finn because of the suggestion of the letter F in the simpler versions of the design. But there are numerous variants of this, some very simple and almost geometric in their regularity and some more flowing and free, often confused by haphazard overprinting (Fig. 22). Usually this design appears on hard pottery and is used on the shoulder only. A few sherds mostly from 30.2, show it on soft pottery and also use it as a narrow band or all over the pot. A few examples have been found of much more sophisticated versions of this pattern (Fig. 23). These have not all been reported before and at first sight suggest a bronze-age development, though this is by no means conclusive.

The whole pots found at 30.3 are all of fairly hard stone-ware. Not all are decorated but when they are it is with a net pattern all over with horizontal lines around the shoulder (Pls. X–XV). Many bear a potter’s mark scratched either inside the lip or on the base, but no two marks have been found alike (Fig. 24). The shapes are similar to those found in other parts of the region and range from rough hand-made bowls (Pl. XI*b*) to footed dishes (Pl. XIV*a*). The two large pots found at the foot of Square D are both net pattern with incised lines around the shoulder. They are thin very strong stone-ware and appear to have traces of dark-brown glaze over the upper part of the pot. The smaller of the two has lumps of glaze-like material on the lip and inside. This has been found before and further supports the theory of

\* Remarkably symmetrical pots can be made without the use of the wheel, using a paddle and anvil. *Ed.*

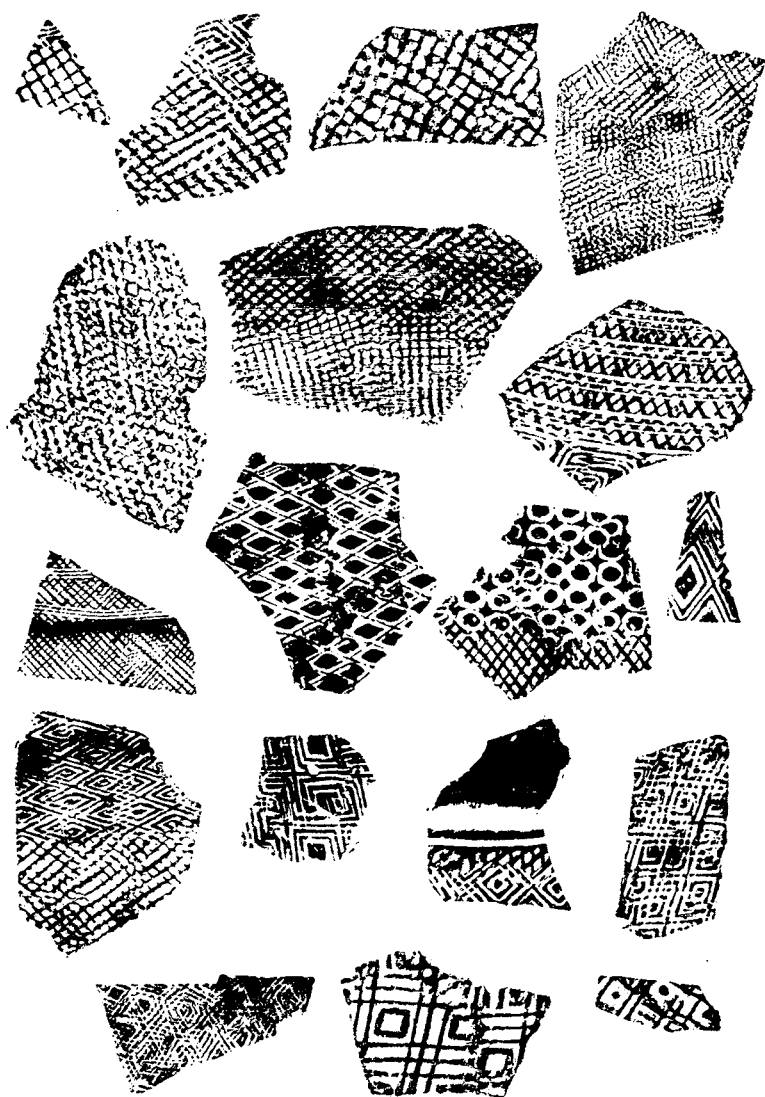


FIG. 21. Rubbings of net and lozenge designs on pottery.  $1/2$  natural size.

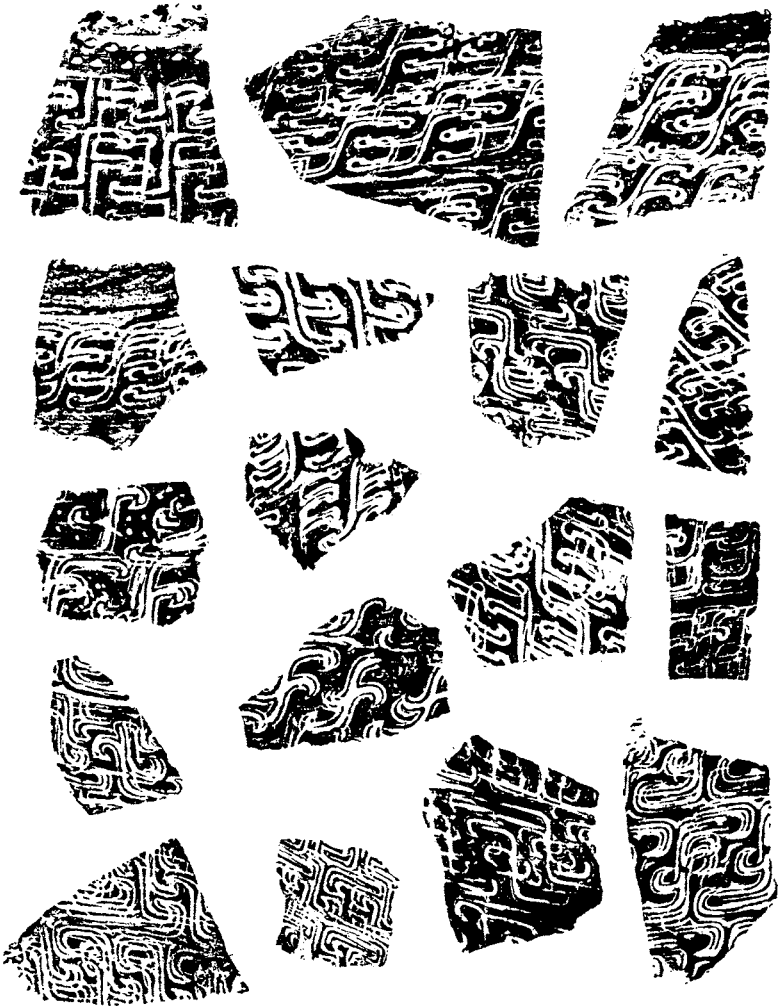


FIG. 22. Rubbings of variants of Double-F design on pottery.  
All from 30.2. 2/3 natural size. See Plate IX.

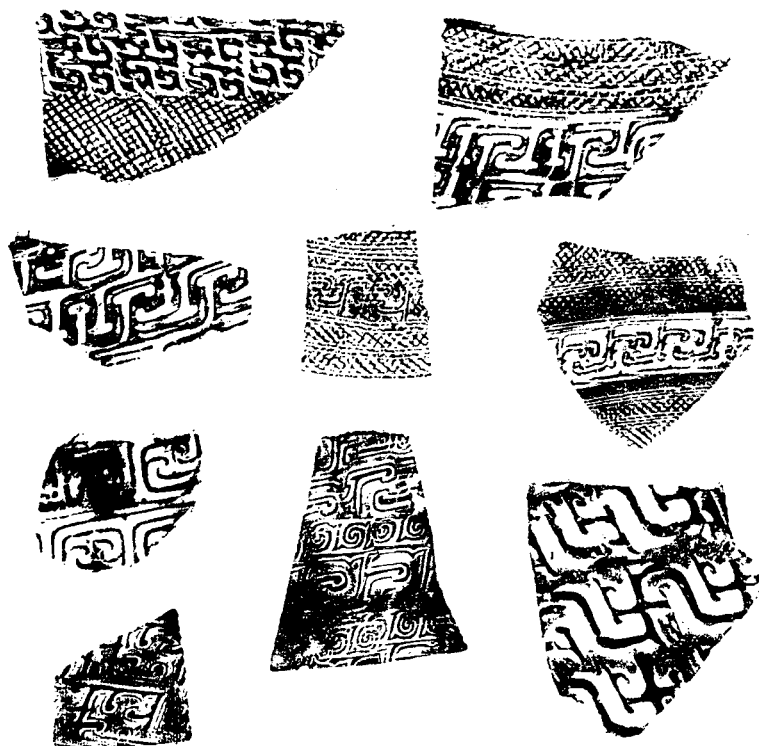


FIG. 23. Rubbings of formalized Double-F design on pottery.  
From 30.1 and 30.2.  $\frac{2}{3}$  natural size. See Plate IX.

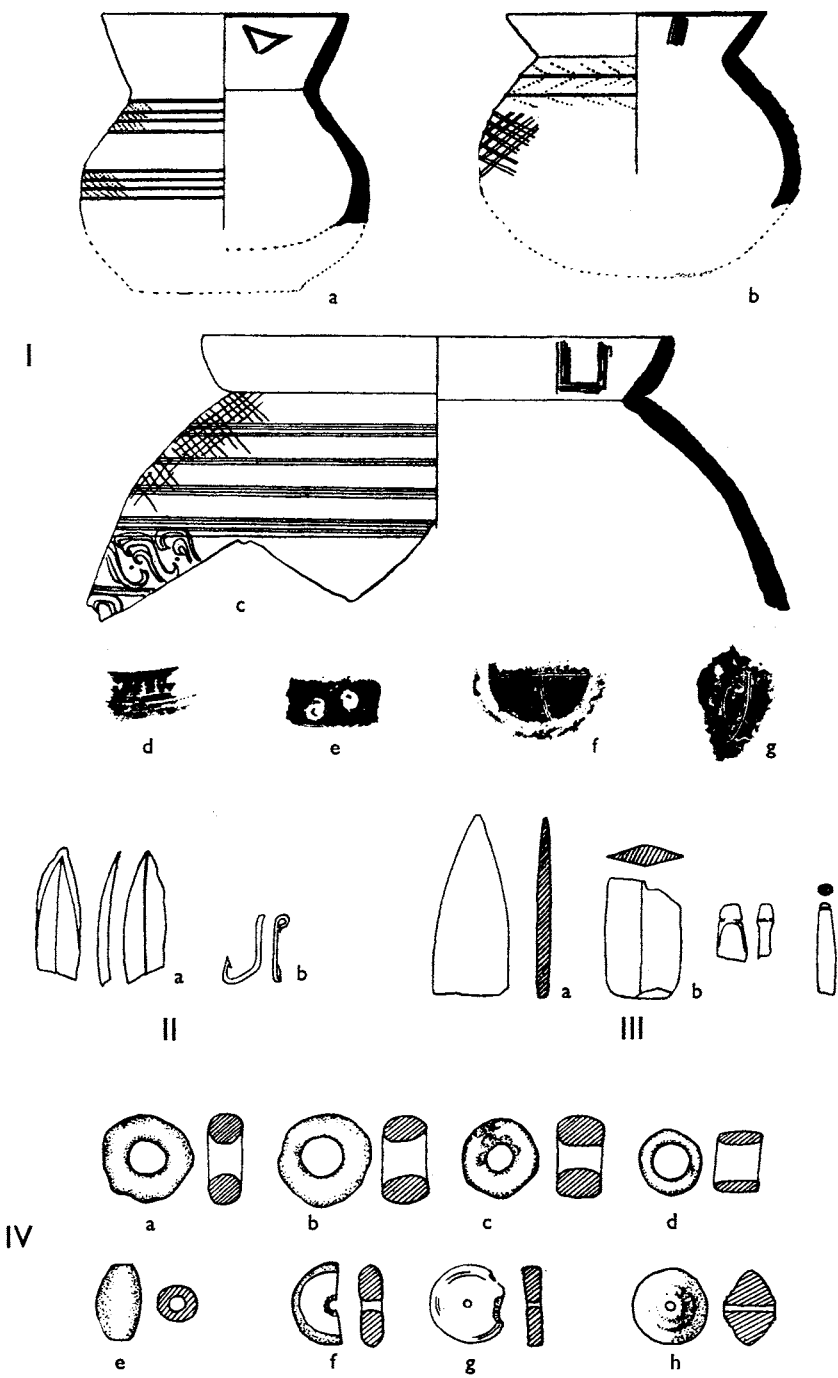


FIG. 24. Potter's marks, bronze fragments, stone weapons, fishermen's net weights and spindle whorls. 1/2 natural size. For details, see foot of opposite page.



Warring States dating in so far as felspathic glaze on stone-ware seems to appear at or about this time in North China. The origin of these large pots and indeed all the hard stone-ware is not clear. No kiln has been found in the area, so the assumption is that they were imported either from the Canton region or from further north-east in Kwangtung in the Ng Wa 五華 region, as kilns have been found in each of those places.

There is nothing to support the theory that the soft ware is of an earlier date than the hard. In fact in both digs, and most clearly in 30.3, where there was one hard pot there were also the remains of several soft pots.

The bowl found at 30.4 (Pl. XVa) is of a different type and appears to have been coated with glaze or slip. It is definitely entirely wheel-made, is very smooth and the body is of lighter more brittle material. This may well be of a later date and bears some resemblance to a Six Dynasties piece (A.D. 220-580).

*Bronze.* The two artifacts found are fragments of a leaf-shaped knife and a fish-hook (Fig. 24, II).

The knife has been reported from Lamma Island by Father Finn and is usually regarded as of Warring States Period. The fish-hook is in perfect condition though patinated. This has also been reported by Father Finn (1958) and by Cheng Kung-chieh (1957).

*Spindle Whorls.* These are of pottery and stone, some having parallel incised lines on the surface (Fig. 24, III).

One stone fragment suggests a spindle shaft but has not been definitely identified (Fig. 24, III).

Fishermen's net weights. These are of pottery and stone and are very rough. With the fish-hook, they indicate the only signs of a fishing people (Fig. 24, IV).

*Weapons.* Very few hunting or fighting implements have been reported from local sites. Here only two pieces were found, one a perfect small spear head and the other a fragment of a spear head (Fig. 24, III). These have also been reported in Changsha excavations of Warring States sites (Chung-kuo ko-hsüeh yüan 1957).

M. T.

*Fig. 24. Explanations*

I. Potter's marks. Drawings and rubbings.

- |  |  |
|--|--|
| a. Mark inside the rim, grey mottled stone-ware, 30.1. | e. Mark inside the foot. See Plate 8c. |
| b. Mark inside the rim, grey mottled stone-ware, 30.2. | f. Mark on the base. See Plate.        |
| c. Mark inside the rim, red smooth stone-ware, 30.1.   | g. Mark on the base. See Plate.        |
| d. Mark outside the rim. See Plate 7a.                 |  |

II. Bronze fragments. See Plate IV.

- a. Fragment of knife blade, 30.2.  
b. Fish hook, 30.2.

III. See Plate IV.

- a. Small spear head, 30.2.  
b. Section of spear head, 30.2.

IV. Fishermen's net weights and spindle whorls. 2/3 natural size.

- |   |                                      |
|---|--------------------------------------|
| a-e. Net weights of pottery and stone, 30.1 and 30.2. | g, h. Spindle whorls, pottery, 30.2. |
| f. Spindle whorl, stone, 30.2.                        | i, j. Unidentified stone, 30.2.      |

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The Hong Kong Government generously gave \$3,000 to pay for labourers and provide compensation to the farmers. The District Commissioner of the New Territories and his officers in the Southern District provided sea transport, made compensation assessments and cheerfully undertook the laborious task of negotiating with the villagers. The Commandant of the Royal Hong Kong Defence Force and the Principal of La Salle College kindly loaned camp equipment. Mr C. H. W. Robertson, General Manager of the Shell Company, Hong Kong was most co-operative in arranging for the Carbon-14 dating test and paying all expenses. Thanks are due to Mrs R. B. Maneely, Miss E. Oxtoby and Miss M. Tregear for their patient work with the rubbings and drawings. The technical staffs of the Department of Geography and Geology and the Museum of Chinese Art and Archæology were of great help with their photography, technical drawings and mapping.

Members of the University Archæological Team who took part in the work:

Professor S. G. Davis	Bro. Henry	Dr T. R. Tregear
Dr S. M. Bard	Mr. J. Llewellyn	Miss M. Tregear
Miss E. Oxtoby	Mr G. C. M. Lupton	Mr B. V. Williams
Mr So Chak Lam	Mrs R. B. Maneely	Miss D. Wong
Miss J. Lin	Mr R. B. Maneely	Miss J. Wyard
Mr G. Hollmann	Mr Chiu Tze Nang	Mr Ng Ming Sum
Mr J. Whiteley	Mr J. W. Hayes	

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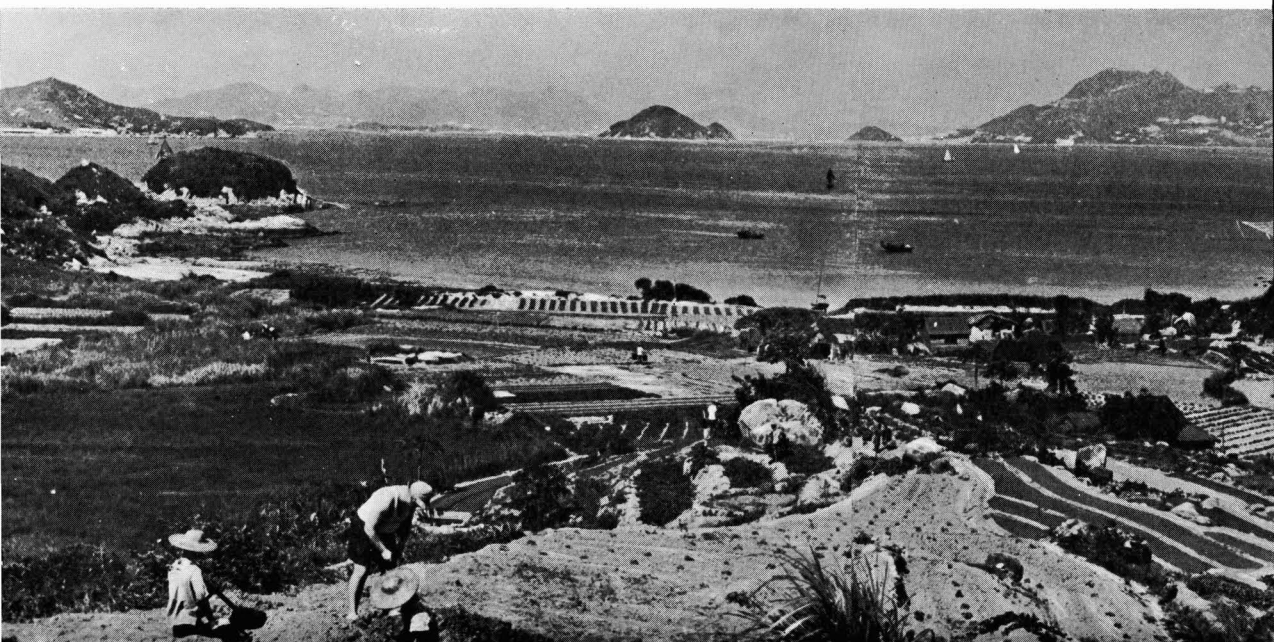
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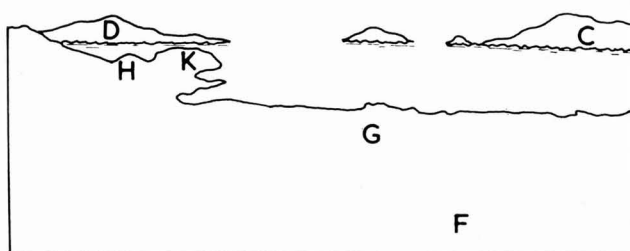
MAN KOK TSUI

(Archæological Site 30, Hong Kong)

P L A T E S



Panorama of Man Kok Tsui looking eastwards, with key showing archaeological



D: Ping Chau To.

K: Site 30.5.

H: Site 30.3.

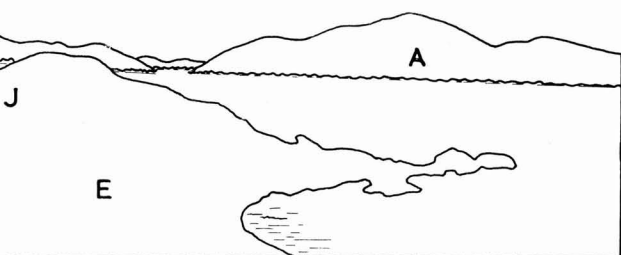
G: Site 30.2.

F: Site 30.1.

C: H



ns of Site 30. See also Figs. 2 and 3, on pages 185-6, and Fig. 5 on page 190.



Island.  
: Chau Kung To.  
J: Site 30.4.  
E: Kiln.

A: Ni Ku Chau.



View of the 'Kiln' at the foot of 30.4; see page 191.



The excavations at 30.3.

*Top.* Square B. See Fig. 9.

*Bottom.* On left slope Square B. On the right hillock the steps lead to Square D.

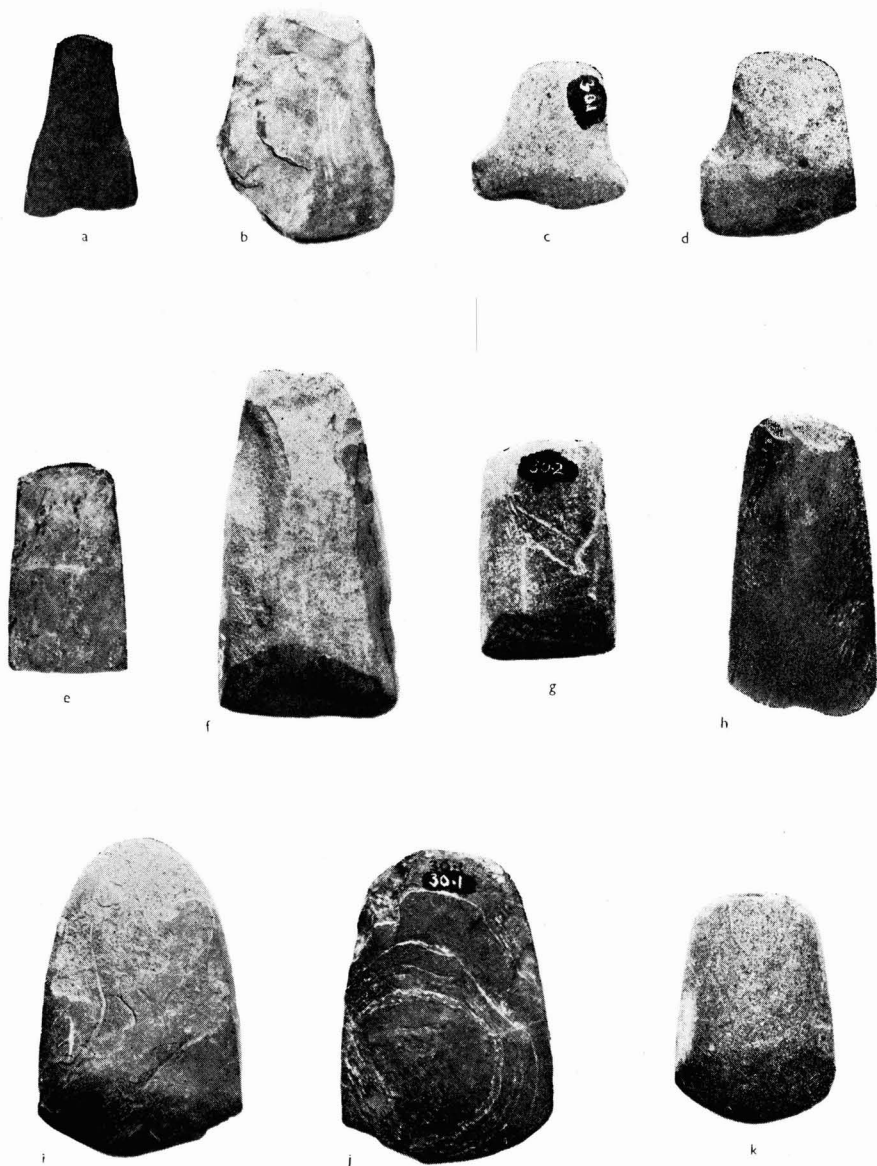




*Pots in situ.*

- Top.* The whole pot excavated in trench B showing the typical angle at which these pots were lying. See Fig. 9 and Plate XIIIa.
- Bottom.* Showing the place at which the large pot (Plate XIIa) was found by the villagers during terracing. See Fig. 10, square D.



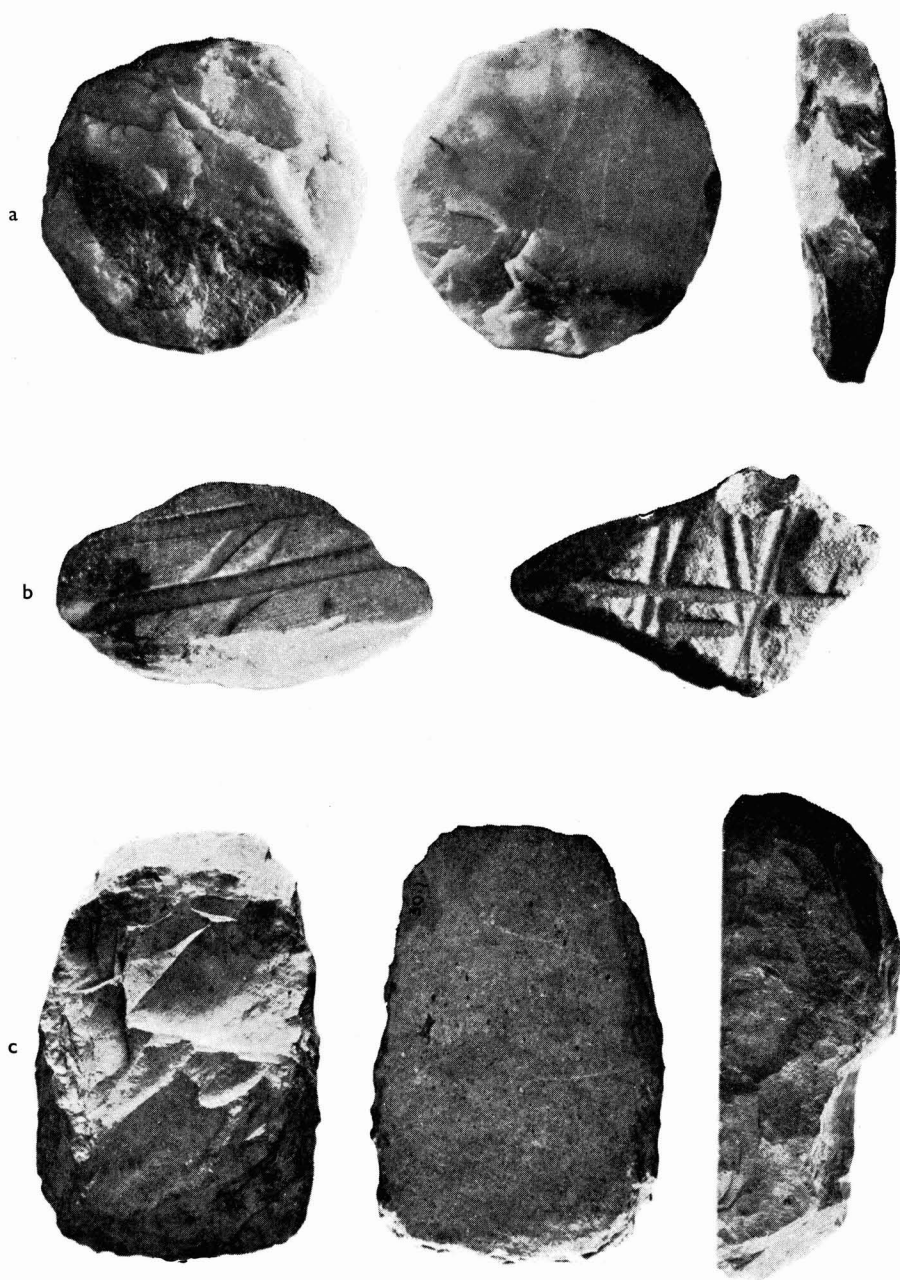


## Representative adzes.

*a-d* Semi-shouldered. See Fig. 16, II *e, a, d, c*.

*e-h* Stepped and rectangular. See Fig. 16, I *b, f, e, a*.

*i-k* Lentoid. See Fig. 16, III *a, d, c*.

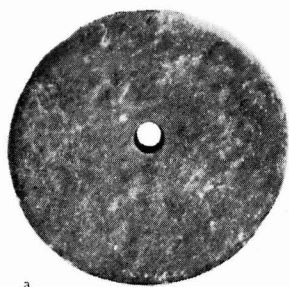


## Stone artifacts.

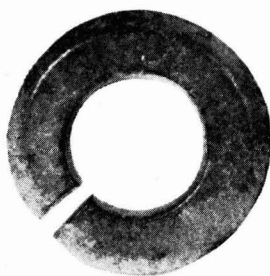
*a.* Quartzite disc. See Fig. 17*a*.

*b.* Grooved grinding stones. See Fig. 15.

*c.* Rough-out for a stone adze. See Fig. 13*c*.



a



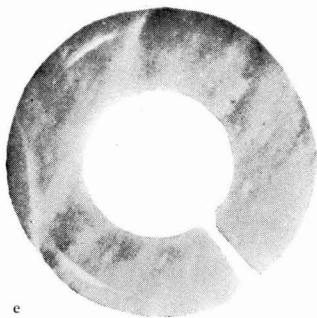
b



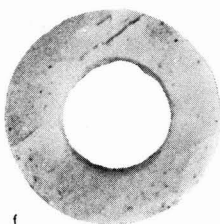
c



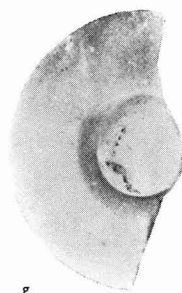
d



e



f



g

## Stone rings.

- a.* Green soap-stone, 30.3. See Fig. 19, IVa.
- b.* Fine grained volcanic, 30.1. See Fig. 19, IVc.
- c.* Black rhyolite/dolerite, 30.3. See Fig. 19, IVe.
- d.* Rhyolite, 30.3. See Fig. 19, IVf.
- e.* Quartzite, 30.3. See Fig. 19, IVb.
- f.* Quartzite, 30.2. See Fig. 19, IVd.
- g.* Quartzite, half-made ring showing core in place. See Fig. 18.

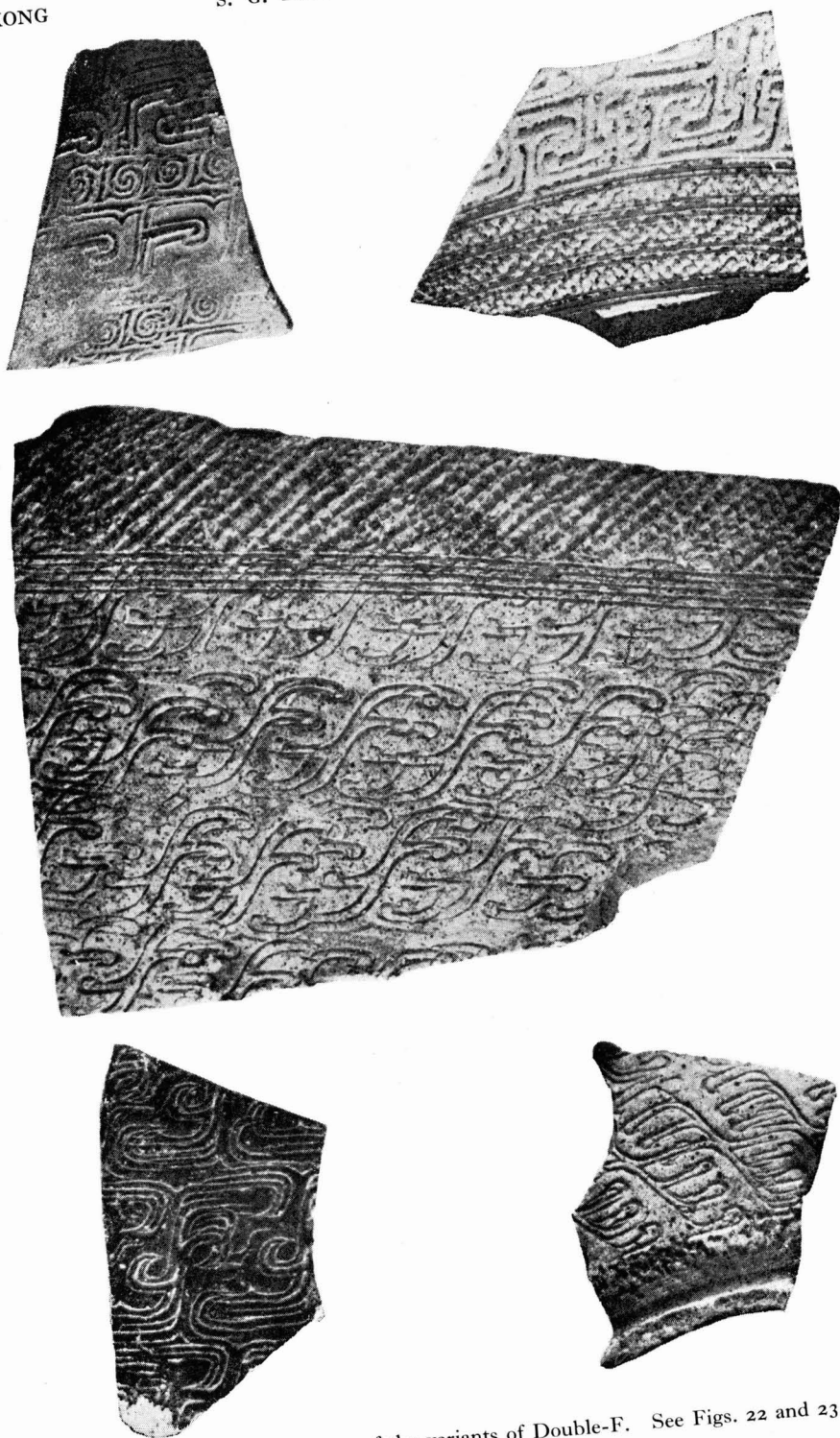


Potsherds to show some of the impressed patterns on soft pottery. See Fig. 20.

HONG KONG

S. G. DAVIS AND M. TREGAR

PLATE IX



Potsherds to show some of the variants of Double-F. See Figs. 22 and 23.



a



b

Whole pots. Drawings 1/3 natural size.

a. Dark-grey mottled stone-ware, 30.3 surface. Ht. 3.75 in.; wt. 465.5 gm.

b. Buff stone-ware, 30.3 surface. Ht. 5 in.; wt. 891.5 gm.



Whole pots. Drawings  $\frac{1}{3}$  natural size.

a. Purplish-grey mottled stone-ware, 30.3 surface. Ht. 3.25 in.; wt. 280 gm.

b. Grey stone-ware, 30.3. Excavated at the base of trench D (see Fig. 10) found inside large pot, Plate 12a. Ht. 3.6 in.; wt. 625.4 gm.





a



b

Whole pots.

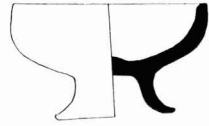
- a.* Dark-purplish grey stone-ware very slightly mottled with traces of glaze(?), 30.3. Excavated at the base of trench D. See Plate IV bottom, and Fig. 10. Ht. 18 in.
- b.* Purplish-buff stone-ware with traces of glaze, 30.3. Excavated at the base of trench D close to *a*. See Fig. 10. Ht. 16 in.



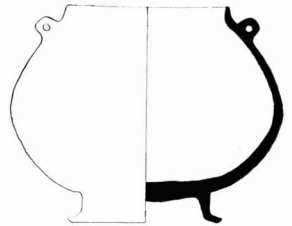


Whole pots. Drawings 1/3 natural size.

- a.* Grey mottled stone-ware, 30.3. Excavated in trench B. See Plate IV*a* and Fig. 9. Ht. 4.9 in.; wt. 672 gm.
- b.* Grey stone-ware, 30.3. Excavated in trench D. See Fig. 10. Ht. 5.4 in.; wt. 532.5 gm.



a



b

Whole pots. Drawings 1/3 natural size.

a. Purplish-grey mottled stone-ware, 30.3 surface. Ht. 3 in.; wt. 383 gm.

b. Purplish-buff stone-ware, 30.3 surface. Ht. 5.75 in.; wt. 755.8 gm.



Whole pot from Site 30.4. Drawing  $\frac{1}{3}$  natural size.  
 Light-grey smooth stone-ware with traces of slip or glaze, 30.4 surface.  
 Ht. 2.5 in.; wt. 251 gm. See page 196.



a



b



c

Bronze artifacts and stone spear-head.

- a. Bronze fragment of knife. See Fig. 24, IIa.
- b. Bronze fish-hook. See Fig. 24, IIb.
- c. Stone spear-head. See Fig. 24, IIIa.